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EXAMINER
SHEW, JOHN

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/763,885	IMMONEN ET AL.
	Examiner	Art Unit
	John L Shew	2664

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

Page 12 line 19 cites "access point 5" should be "access point 51".

Page 12 line 25 cites "access point 5" should be "access point 51".

Page 26 line 11 cites "ACPC" should be "APCP".

Appropriate correction is required.

Claim Objections

2.   Claims 15, 29-39 are objected to under 37 CFR 1.75(c) as being in improper

form because a multiple dependent claim cannot depend on two claims simultaneously.

See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19, 22, 23, 26, 27, 28, 29, 30, 32,

33 are rejected under 35 U.S.C. 102(e) as being anticipated by Jorgensen.

Claims 1, 2, 3, 5, 6, 22, 23, Jorgensen teaches a method for supporting the quality of

service in packet data transmission in a radio network (FIG. 2D, column 2 lines 31-36)

referenced by QoS over a wireless point-to-multi-point transmission system, whereby

transmission over the air interface is in radio flows (FIG. 15B) referenced by Wireless

Medium for over the air interface with IP-Flow QoS Classes 1564a-1564f for radio flows,

the method comprising selecting a radio flow having appropriate quality of service

characteristics for the packet to be transmitted over the air interface (FIG. 15A)

referenced by Look-up IP-Flow application's QoS requirements unit 1532, from a

selection of predefined default radio flows having different quality of service

characteristics (FIG. 15B, column 62 lines 42-47) referenced by predefined IP-Flow

QoS Classes 1-5, m 1564a-1564f with each being a different level quality of service.

Jorgensen teaches selecting the radio flow comprises providing the packet to be

transmitted with a radio flow identifier (FIG. 12E) referenced by the IP-Flow Identifier

1234b within the packet, selected from predefined default radio flow identifiers

representative of different quality of service characteristics (FIG. 15A, column 62 lines

42-47) referenced by Look-up IP-Flow unit1532 using IP-Flow QoS Requirement Table

1534 with the default being classes 1564a-1564f.

Jorgensen teaches mapping the packet into the identified default radio flow for

transmission over the air interface (FIG. 15A, FIG. 15B) referenced by Classify packet

into QoS-Class unit 1548 using QoS Class IP-Flow Table information 1544 for

transmission over the Wireless Medium.

Jorgensen teaches monitoring packets to be transmitted over the air interface to detect

IP flows (column 76 lines 66-67, column 77 lines 1-6) referenced by the QoS

performance monitoring, switching a detected IP flow to a dedicated radio flow having

corresponding quality of service characteristics (column 67 lines 41-58) referenced by

existing IP flow with the QoS requirements matched to the IP flow.

Jorgensen teaches switching the detected IP flow to a dedicated radio flow (FIG. 15A)

referenced by the Look for match with existing IP-Flow unit 1522 followed by the Look-

up IP-Flow application's QoS requirements unit 1532, providing the packets of a

detected IP flow with an identifier of the dedicated radio flow (FIG. 15A) referenced by

the Classify packet into QoS-Class unit 1542, and mapping the packets of the detected

IP flow into the identified dedicated radio flow for transmission over the air interface

(FIG. 15A) referenced by IP-Flow QoS Class Queuing Processor unit 1562 which maps

the packets into the proper class queue.

Claims 7, 8, 9, 11, 12, 26, 27, 28, Jorgensen teaches a radio access system for

supporting the quality of service in data packet transmission over the air interface (FIG.

2D, column 2 lines 31-36) referenced by QoS over a wireless point-to-multi-point

transmission system, the system comprising a selection of predefined default radio

flows having different quality of service characteristics (FIG. 15B, column 62 lines 42-

47) referenced by predefined IP-Flow QoS Classes 1-5, m 1564a-1564f with each being

a different level quality of service, and means for selecting a radio flow having

appropriate quality of service characteristics for the packet to be transmitted over the air

interface from the selection (FIG. 15A) referenced by Look-up IP-Flow application's QoS

requirements unit 1532 followed by the Classify packet into QoS-Class unit 1542.

Jorgensen teaches the radio flow selecting means (FIG. 15B) referenced by IP-Flow

QoS Class Queuing Processor unit 1562, comprises means for providing the packet to

be transmitted with a radio flow identifier selected from identifiers corresponding to the

predefined default radio flows (FIG. 12E, FIG. 15B) referenced by the IP-Flow Identifier

1234c in association with the default IP-Flow QoS Class Queues 1564a-1564f.

Jorgensen teaches mapping the packet into the identified default radio flow for

transmission over the air interface (FIG. 15A, FIG. 15B) referenced by Classify packet

into QoS-Class unit 1548 using QoS Class IP-Flow Table information 1544 for

transmission over the Wireless Medium.

Jorgensen teaches a means for monitoring packets to be transmitted over the air

interface to detect IP flows (FIG. 11, column 76 lines 66-67, column 77 lines 1-6)

referenced by the QoS and SLA Administration unit 1106 performance monitoring, a

means for switching a detected IP flow to a dedicated radio flow having corresponding

quality of service characteristics (FIG. 15A, column 62 lines 15-32) referenced by the

Look for match with existing IP-Flow unit 1522 matching existing IP flow with the QoS

requirements followed by Classify packet into QoS-Class unit 1542.

Jorgensen teaches the switching means (FIG. 15A) referenced by the Look for match

with existing IP-Flow unit 1522 followed by the Look-up IP-Flow application's QoS

requirements unit 1532, comprises means for providing the packets of a detected IP

flow with an identifier of the dedicated radio flow (FIG. 12E, FIG. 15A) referenced by the

Classify packet into QoS-Class unit 1542 and the packet structure with an IP-Flow

Identifier 1234c, and means for mapping the packets of the detected IP flow into the

identified dedicated radio flow for transmission over the air interface (FIG. 15A)

referenced by IP-Flow QoS Class Queuing Processor unit 1562 which maps the

packets into the proper class queue.

Claim 13, Jorgensen teaches a communication device for use in a system (FIG. 2D)

referenced by the Wireless Base Station 320, which supports the quality of service in

data packet transmission over the air interface (column 3 lines 29-48) referenced by the

IP flow classification based on the Quality of Service levels, and comprises a selection

of predefined default radio flows having different quality of service characteristics (FIG.

15B, column 62 lines 42-47) referenced by predefined IP-Flow QoS Classes 1-5, m

1564a-1564f with each being a different level quality of service, wherein the device is

arranged to select a default radio flow having appropriate quality of service

characteristics for the packet to be transmitted over the air interface from the selection

(FIG. 15A) referenced by Look-up IP-Flow application's QoS requirements unit 1532

followed by the Classify packet into QoS-Class unit 1542.

Claims 16, 17, Jorgensen teaches a method for supporting the quality of service in

packet data transmission in a radio network (FIG. 2D, column 2 lines 31-36) referenced

by QoS over a wireless point-to-multi-point transmission system, whereby transmission

over the air interface is based on packet scheduling (FIG. 15A) referenced by Provide

IP-Flow QoS-Class to Frame Scheduler unit 1550, the method comprising selecting a

radio scheduling queue having appropriate quality of service characteristics for the

packet to be transmitted over the air interface (FIG. 15A) referenced by Look-up IP-Flow

application's QoS requirements unit 1532 followed by Classify packet into QoS-Class

unit 1542, from a selection of default radio scheduling queues having different quality of

service characteristics (FIG. 15B) referenced by predefined default IP-Flow QoS Class

queues 1564a-1564f with each being a different level quality of service.

Jorgensen teaches the radio scheduling queues may be either aggregated in the air

interface (FIG. 12E) referenced by the IP-Flow Identifier 1234c in conjunction with the

Slot Seq. Number 1234d wherein the frame can carry multiple slots corresponding the

the IP-Flow thereby aggregating the scheduling queues, or identified separately in the

air interface with the aid of queue or connection specific radio flow identifiers (FIG. 12E)

referenced by the IP-Flow Identifier 1234b which equates to the radio flow identifier and

an associated QoS.

Claim 18, Jorgensen teaches a radio access system (FIG. 2D) referenced by the

Wireless Base Station 320, for supporting the quality of service in data packet

transmission over the air interface (column 2 lines 31-36) referenced by QoS over a

wireless point-to-multi-point transmission system, the system comprising a selection of

default radio scheduling queues having different quality of service characteristics (FIG.

15B) referenced by predefined default IP-Flow QoS Class queues 1564a-1564f with

each being a different level quality of service, means for selecting a radio scheduling

queue having appropriate quality of service characteristics for the packet to be

transmitted over the air interface from the selection (FIG. 15A) referenced by Look-up

IP-Flow application's QoS requirements unit 1532 followed by the Classify packet into

QoS-Class unit 1542.

Claim 19, Jorgensen teaches a communication device (FIG. 2D) referenced by the

Wireless Base Station 320, for use in a system which supports the quality of service in

data packet transmission over the air interface (column 2 lines 31-36) referenced by

QoS over a wireless point-to-multi-point transmission system, and comprises a selection

of default radio scheduling queues having different quality of service characteristics

(FIG. 15B) referenced by predefined default IP-Flow QoS Class queues 1564a-1564f

with each being a different level quality of service, wherein the device is arranged to

select a default radio scheduling queue having appropriate quality of service

characteristics for the packet to be transmitted over the air interface from the selection

(FIG. 15A) referenced by Look-up IP-Flow application's QoS requirements unit 1532

followed by the Classify packet into QoS-Class unit 1542.

Claim 15 is rejected by claims 13 and 7 above.

Claim 29 is rejected by claims 13 and 8 above.

Claim 30 is rejected by claims 13 and 9 above.

Claim 32 is rejected by claims 13 and 11 above.

Claim 33 is rejected by claims 13 and 12 above.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 10, 14, 20, 21, 24, 25, 31, 34, 35, 36, 37, 38, 39 are rejected under 35

U.S.C. 103(a) as being unpatentable over Jorgensen as applied to claims 1-3, 5-9, 11-

13, 15-19, 22-23, 26-30, 32-33 above, in view of Bautz et al.

Claims 4, 10, 14, 20, 21, 24, 25, Jorgensen teaches a wireless transmission system

supporting a quality of service. Jorgensen teaches a means of performing default radio

flow selection for the active connection (FIG. 15B, column 3 lines 49-61) referenced by

the classifier selecting a QoS class grouping for the IP-Flow with the grouping into

default Class 1 1564a through Class m 1564f.

Jorgensen does not teach detection of a handover for an active connection nor a mobile

communication device.

Bautz teaches a means for detecting handover of a mobile communications device

having an active connection from one radio subnetwork to another (Fig. 1, Page 2

column 2 paragraph [0025-0026]) referenced by the detection of a need for a hand over

from a first base station to a second base station each covering a subnetwork by the

mobile terminal followed by the actual handover action. It is obvious to perform a radio flow selection in response to a handover detection prior to the handover action, further it is obvious to incorporate the handover detection and processing method to the base station for compatibility with the mobile station to perform such action.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the handover method of Bautz to the wireless QoS transmission system of Jorgensen for the purpose of avoiding loss of information by a mobile terminal.

Claim 31 is rejected by claims 13 and 10 above.

Claim 34 is rejected by claims 14 and 7 above.

Claim 35 is rejected by claims 14 and 8 above.

Claim 36 is rejected by claims 14 and 9 above.

Claim 37 is rejected by claims 14 and 10 above.

Claim 38 is rejected by claims 14 and 11 above.

Claim 39 is rejected by claims 14 and 12 above.
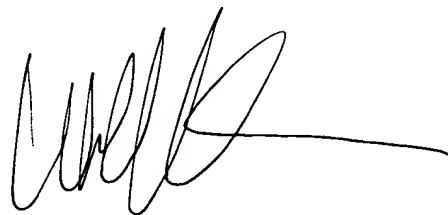
Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent number 6597682, Kari discloses a channel allocation method for a packet network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Shew whose telephone number is 571-272-3137. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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